

Date Wednesday, 15/08/2007 4:00:28 PM
 User Linda Lacelle

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: EXTRUSION "I" BEAM WEB 4"
Jot Number	: 33940		
Estimate Number	: 10155		
P.C. Number	: <i>N/A</i>	Part Number	: D25003100
This Issue	: 15/08/2007 S.O. No. : <i>N/A</i>	Drawing Number	: D2500 REV G
Prsht Rev.	: <i>NC</i>	Project Number	: <i>N/A</i>
First Issue	: <i>NA</i> Type : PURCHASED PARTS	Drawing Revision	: <i>G</i>
Previous Run	: 31223	Material	: <i>N/A</i>
Written By	: <i>[Signature]</i>	Due Date	: 09/09/2007
Checked & Approved By	: <i>[Signature]</i>	Qty:	<i>189</i> 80 Um: Each
Comment	: Est E 02.09.10 Added DSK 066 KJ est F 07.07.06 rev G dwg EC		

Additional Product

Jot Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: *4374*

- a) Extrude as per Dwg D2500
- b) Material: 6061-T6 (QQ-A-200/8)
- c) Minimum yield tensile strength = 35 ksi
- d) Minimum ultimate tensile strength = 38 ksi
- e) Minimum elongation = 10%
- f) Order at 100" long
- g) Caradon Indalex Tool # MS-18867
- h) To be packed per DSK 066
- i) Pull test to ASTM standard B221 required.
- j) Material certification is required

*C207108116**(80)*

2.0

D25003100P

Ext'n - "I" Beam Web 4"



Comment: Qty.: 1.0000 Each(s)/Unit Total: 80.0000 Each(s)
 EXTRUSION "I" BEAM WEB 4"

*C2071139**(189)*

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage
 Ensure material certification is attached

AWM
SRY 7-12-5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: JD Date: 8/12/06
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 15/08/2007 4:00:28 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: EXTRUSION 'I' BEAM WEB 4"

Job Number: 33940

Part Number: D25003100

Job Number:



Seq. #:	Machine Or Operation:	Description :
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4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Inspect dimensions per Dwg D2500

Check Pull test per Dwg D2500 for compliance page attached.

Check hardness with Webster tester

L 07/12/05 **(189)**

5.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *L.G.*

SR/ANM 07-12-05

180

6.0	QC21	FINAL INSPECTION/W/O RELEASE
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Comment: FINAL INSPECTION/W/O RELEASE

(189)

D 07/12/06

Job Completion



L 07-12-05

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2500	REV. G SHEET 1 OF 3
DATE 07.04.17		TITLE EXTRUSION	SCALE NTS
A	96.03.19	NEW ISSUE	
B	96.03.24	CHANGE INTERNAL WEB	
C	96.04.26	ADD D2500-3 WEB	
D	96.10.07	ADD MATERIAL PROPERTIES	
E	96.10.24	CHANGE MATERIAL TEMPER	
F	97.09.29	CHANGE MAT. TO 6061-T6	
G	07.04.17	ADD NOTES 3,5,6	

RELEASED
07-06-28-#

1. MATERIAL: 6061-T6 (QQ-A-200/8)

MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
MINIMUM ELONGATION = 8%

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO
ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY
TO ENSURE THAT THE BATCH MEETS THE ABOVE
MINIMUM MECHANICAL PROPERTIES

2. BREAK ALL SHARP CORNERS 0.010 MAX

3. ALL DIMENSIONS ARE IN INCHES

4. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE
NOTED.

5. FOR D2500-1 PART NUMBER IS D2500-1-XXX WHERE XXX IS
CUT LENGTH (EX. D2500-1-190 IS 190" LONG)
D2500-1 EXTRUSION MANUFACTURED FROM:

- A) BON L DIE # 897015 -> PREFERRED
B) CARADON MIDEAST DIE # PAH-28030
C) CARADON MTL DIE # MH-18868

w/0: 33940

6. FOR D2500-3, PART NUMBER IS D2500-3-XXX WHERE XXX IS
CUT LENGTH IN INCHES (EX. D2500-3-100 IS 100" LONG)
D2500-3 EXTRUSION MANUFACTURED FROM:

- A) CARADON INDALEX DIE # MS-18867

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

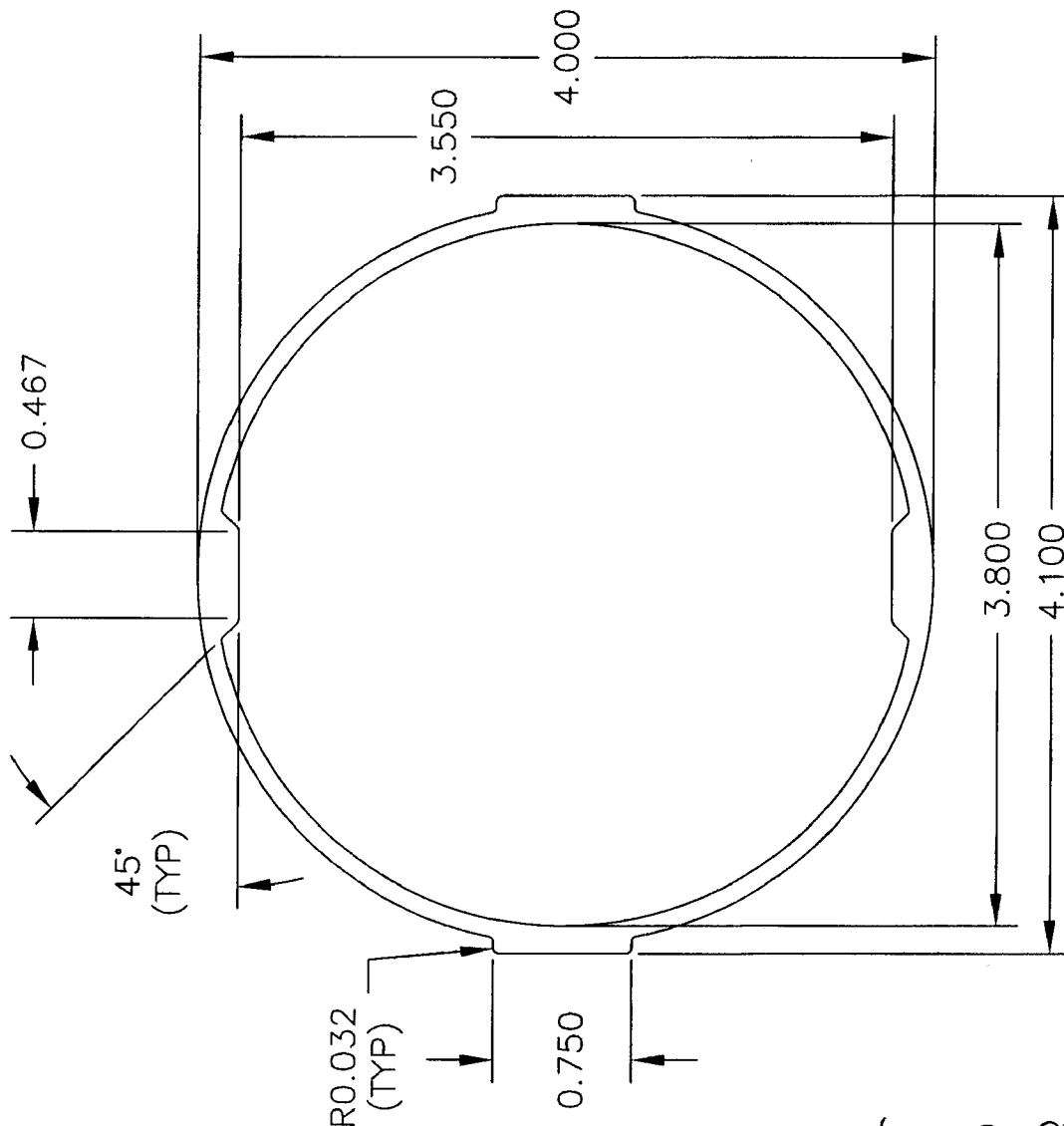
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN [Signature]	DRAWN BY RH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2500	REV. G SHEET 2 OF 3
DATE 07.04.17		TITLE EXTRUSION	SCALE 1:1

RELEASED
07.06.28 [Signature]



D2500-1

w/0: 33940

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

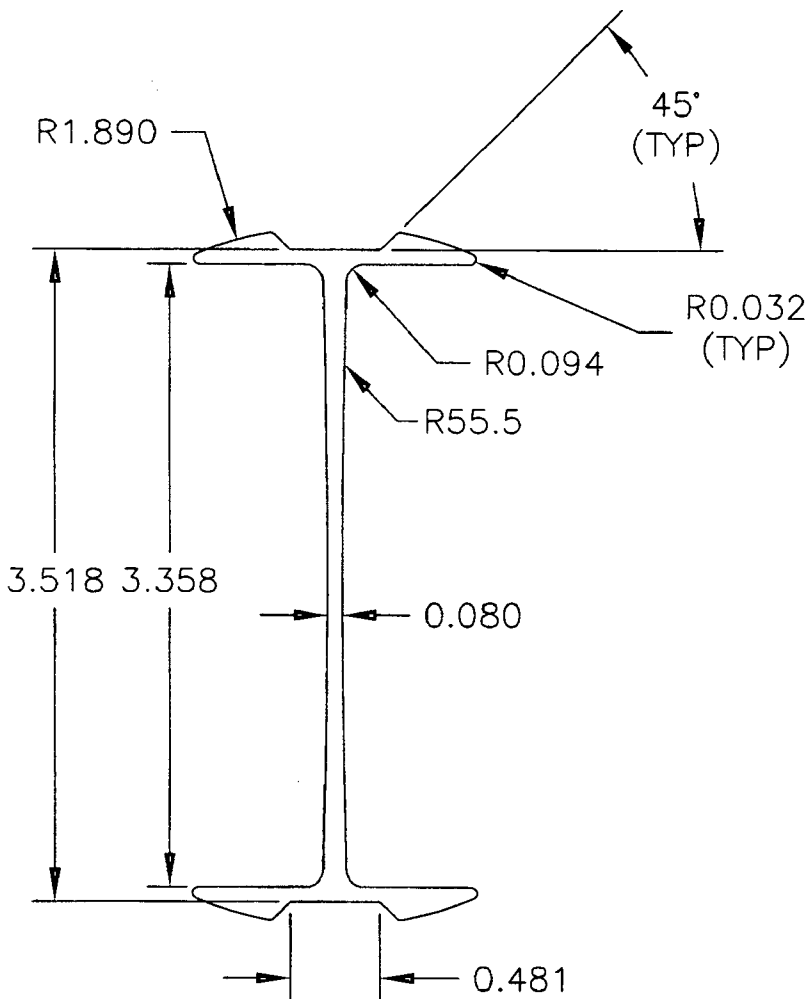
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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				HAMKESBURY, ONTARIO, CANADA
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	REV. C
				DRAWING NO. D2500
DATE	07.04.17			SHEET 3 OF 3
				SCALE 1:1
				TITLE EXTRUSION

RELEASED
07.06.28



D2500-3

109 (70)

w/d: 33940



325 rue Avro
Pointe-Claire QC H9R 5W3

Téléphone (514) 697-5120
Fac-simile (514) 694-8310

Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**
Adresse / Address : **1270 ABERDEEN STREET
HAWKESBURY ONT,
K6A 1K7**

commande Indalex / Indalex order # : **7111793**

bon de commande / Purchase order # : **4374**

de matrice / Die # : **MS 18867** Description : **D2500-3**

Alliage & trempage / Alloy & temper : **6061 T6**

Contrôle / Control # : **62481-1**

Coulée / Cast # : **42082**

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	41292
Contrainte élastique Yield stress (psi)	35 000	38615
% élongation dans 2" % elongation in 2"	8	12
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	92

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0.20 - 0.60	0.35 Max	0.10 Max	0.10 Max	0.45 - 0.90	0.10 Max	0.10 Max	0.10 Max
6005	0.60 - 0.90	0.35 Max	0.10 Max	0.10 Max	0.40 - 0.60	0.10 Max	0.10 Max	0.10 Max
6005A	0.68 - 0.72	0.15 - 0.27	0.08 - 0.12	0.20 - 0.24	0.48 - 0.52	0.03 Max	0.05 Max	0.03 Max
6061	0.40 - 0.80	0.70 Max	0.15 - 0.40	0.15 Max	0.80 - 1.20	0.04 - 0.35	0.25 Max	0.15 Max
6351	0.7 - 1.3	0.5 Max	0.10 Max	0.40 - 0.80	0.40 - 0.80	—	0.20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 excepté pour la section 8.2 (nombre de spécimen) et AMS QQA 200/8 excepté pour la section 4.2.3.1 (nombre de spécimen) qui sont déterminés par les exigences du client.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 except for section 8.2 (number of specimen) and AMS QQA 200/8 except for section 4.2.3.1 (number of specimen) which is determined by customer requirement.

Sincèrement vôtre,
Yours truly,

date : 2007-11-27

Bruno Morency
Technicien de la qualité
Quality technician

Indalex Limited

11/27/2007 TUE 11:42 FAX 613 632 4443 DART HELICOPTER SERVICES →→ DAS - LINDA

001/002

11/27/2007 TUE 11:33 FAX 514 694 8310 Indalex Mtl

001/002



INDALEX LIMITED
325 AVRO Street
POINTE-CLAIRE, QC H9R 5W3
TELEPHONE: (514) 697-5120 & (800) 563-5120
FACSIMILE: (514) 694-8310 & (800) 563-8310

FACSIMILE TRANSMITTAL SHEET

TO: Christina Young

FROM: Bruno Morency
Quality Technician

COMPANY:
DART AEROSPACE LTD

DATE:
2007/11/27

FAX NUMBER:
1(613) 632-4443

TOTAL NO. OF PAGES INCLUDING COVER:
2

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REPORT

TIME:

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Mechanical properties report.

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